

REMARKS

This responds to the Office Action mailed on March 2, 2006.

Claims 1, 4-5, and 8 are amended, claims 13-27 are canceled, and claims 28-39 are added; as a result, claims 1-12 and 28-39 are now pending in this application.

Affirmation of Election

Restriction to one of the following claims was required:

- I. Claims 1-13
- II. Claims 14-27

As provisionally elected by Applicants representative, David Peterson, on February 15, 2006, Applicant elects to prosecute the invention of Group I, claims 1-13. The claims of the non-elected invention, claims 14-27 (Group II), are hereby canceled. However, Applicant reserves the right to later file continuations or divisions having claims directed to the non-elected inventions.

§102 Rejection of the Claims

Claims 1-2 and 4-5 were rejected under 35 USC § 102(b) as being anticipated by Pinkhasov (U.S. 4,565,711). Applicant respectfully traverses the rejection for at least the following reasons.

The rejection states that "Pinkhasov 711 shows the container being integrally formed and including multiple components, i.e. it is a full container with a bottom and two side walls which would read on integrally formed and having multiple components as it is situated on turntable (11) as it is interacted with components 13 (vapor generator) and the counterelectrode (21)."

Pinkhasov appears to show a single component quartz crucible 10. Pinkhasov also appears to discuss a method of forming a single layer coating 10'. Boron nitride and silicon nitride are both listed as coating possibilities, however Applicant is unable to find any characterization of coating properties such as interchangeability, or suitability for one chemistry

over another. Applicant is unable to find multiple layer coatings in Pinkhasov, or multiple component crucibles in Pinkhasov.

In contrast, claim 1 as amended includes a base container that includes multiple components. Applicant respectfully submits that turntable 11, vapor generator 13 and counterelectrode 21 may be multiple components, but they are not part of a *base container* as recited in the claim.

Because the Pinkhasov reference does not show every element of Applicant's independent claims, a 35 USC §102(b) rejection is not supported. Reconsideration and withdrawal of the rejection are respectfully requested with respect to claims 1-2 and 4-5.

§103 Rejection of the Claims

Claim 3 was rejected under 35 USC § 103(a) as being unpatentable over Pinkhasov (U.S. 4,565,711) in view of Yamagishi (U.S. 5,788,718). Claims 6-7 were rejected under 35 USC § 103(a) as being unpatentable over Pinkhasov (U.S. 4,565,711) in view of Nakagawa et al. (JP 60141696 A).

Applicant respectfully submits that the additional references of Yamagishi and Nakagawa fail to cure the 35 USC §102(b) rejection based on Pinkhasov for at least the reasons outlined above. Because the cited references, either alone or in combination, do not show every element of Applicant's independent claims, a 35 USC §103(a) rejection is not supported by the references. Reconsideration and withdrawal of the rejection are respectfully requested with respect to claims 3 and 6-7.

Claims 8-10 and 12 were rejected under 35 USC § 103(a) as being unpatentable over Wilson (U.S. 3,503,717) in view of Pinkhasov (U.S. 4,565,711). Claim 11 was rejected under 35 USC § 103(a) as being unpatentable over Wilson (U.S. 3,503,717) in view of Pinkhasov (U.S. 4,565,711) in further view of Yamagishi (U.S. 5,788,718). Claim 13 was rejected under 35 USC § 103(a) as being unpatentable over Wilson (U.S. 3,503,717) in view of Pinkhasov (U.S. 4,565,711) in further view of Nakagawa et al. (JP 6014696 A). Applicant respectfully traverses the rejection for at least the following reasons.

The rejection states that Pinkhasov teaches that “both silicon and boron nitrides were viewed as coating equivalents in the art.” The rejection further states that Nakagawa “teaches a quartz container for example a crucible that has a silicon nitride layer coating and then on top a boron nitride layer unlike how applicant has claimed the crucible with a boron nitride followed by the silicon nitride layer.” Applicant agrees with the Examiner that Nakagawa does not show a boron nitride layer followed by a silicon nitride layer.

Nakagawa recites that boron nitride has “good adhesiveness to a quartz container *due to* (emphasis added) the interposition of a Si_3N_4 layer.” In order to achieve Nakagawa’s goal of improving adhesion, Applicant submits that Nakagawa teaches away from any other order of coating layers. This interpretation is also found in the title of Nakagawa (“Single crystal growth container, e.g. for III-V cpds. – is obts. by *forming silicon nitride then boron nitride layer* (emphasis added) on quartz container”).

Pinkhasov appears to show only a single layer coating on a crucible. Applicant notes that silicon nitride and boron nitride are both recited in Pinkhasov, however Applicant is unable to find in Pinkhasov any teaching of interchangeability or comparison between any single layer coating options.

Applicant respectfully submits that 1) Pinkhasov does not teach interchangeability, and 2) combination of the references as suggested in the rejection is improper because Nakagawa teaches away from changing an order of coating layers. The specification in general, and at least page 6, lines 14-29 discuss advantages of coating layers as recited in the claims.

In contrast, independent claim 8, as amended includes a coating layer covering at least a portion of the base container, wherein the coating layer includes a first layer of boron nitride adjacent to the base container and a second layer of silicon nitride over the layer of boron nitride.

The rejection regarding claim 9 recited that Wilson showed cooling tubes 28 “which would read on directional solidification cooling system.” Applicant further respectfully traverses this characterization of Wilson. While Wilson does appear to show cooling tubes, Applicant is unable to find any teaching in Wilson that indicates directional solidification. The specification in general, and at least page 9, lines 22-29 discuss methods and advantages of directional solidification.

Applicant respectfully submits that the additional references of Wilson and Yamagishi fail to cure the deficiencies of Pinkhasov and Nakagawa for at least the reasons outlined above. Because the cited references, either alone or in combination, do not show every element of Applicant's independent claims, a 35 USC §103(a) rejection is not supported by the references. Reconsideration and withdrawal of the rejection are respectfully requested with respect to Applicant's independent claim 8. Additionally, reconsideration and withdrawal of the rejection are respectfully requested with respect to the remaining claims that depend therefrom as depending on allowable base claims.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((612) 373-6944) to facilitate prosecution of this application.


If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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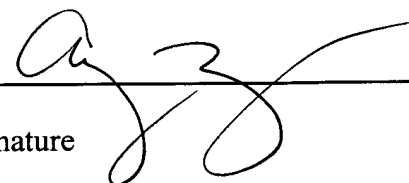
Date 8-2-06

By 
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 2nd day of August.

Amy Moriarty

Name


Signature